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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,143	10/06/2003	Kenichi Yamaguchi	03500.017297	3977

5514 7590 10/14/2005

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EXAMINER	
SCHWARTZ, PAMELA R	

ART UNIT	PAPER NUMBER
1774	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,143	YAMAGUCHI ET AL.	
	Examiner	Art Unit	
	Pamela R. Schwartz	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-28* is/are pending in the application.

4a) Of the above claim(s) *17-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1,2 and 4-28* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-6, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitamura et al. (US2001/0016249). The reference discloses a recording medium for ink jet recording comprising a portion for receiving an ink and holding the coloring agent from the ink (see the abstract). The reference discloses forming an inside ink receiving layer on the substrate as well as an outermost ink receiving layer [0117]. The outermost ink receiving layer comprises a pigment which may be an alumina compound [0118]. The substrate may be a paper sheet which may be coated with cationic resin [0133]. This treatment should inherently cause a gradient of "a reactive substance capable of reacting with said coloring agent" because most ink jet ink dyes are anionic and because applicants disclose achieving the gradient of reactive substance by coating the substrate with cationic material prior to coating with the undercoating. Since the reference discloses multiple ink receiving layers, there will be "an interface constituting a boundary of two different layers" that does not include the increasing region. The alumina compound of the outermost layer may be alumina hydrate [0123]. Since there appears to be no requirement that another cationic substance be present in the medium (there are preferred embodiments including additional cationic materials), the alumina hydrate layer as disclosed would not contain

the maximum concentration of the reactive substance and the increasing region would not be present in the alumina hydrate layer.

It is noted that even though claim 3 has been canceled and the subject matter incorporated into claim 1, upon reconsideration, the subject matter of claim 3 is included in this rejection. The decreasing portion would be present in the absorbent support that has been treated on its surface with a reactive substance. The distribution will inherently decrease throughout its depth and is at a position farther from the surface than the increasing region.

2. Claim s 1, 2, 4-6, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al. (US2001/0016249). The reference is relied upon as set forth above. It is believed to fully anticipate the reference, however, if, for example, there is some cationic resin present at the surface of the lower ink receiving layer, the amount is not considered significant enough to patentably distinguish the claimed invention from that of the reference. It would have been obvious to one of ordinary skill in the art to have little or not cationic resin pass through to the surface of the undercoat since there is no disclosed intent in the reference to have cationic resin pass through to this surface.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2 and 4-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 10/664872 in view of Kitamura et al. (US 2001/0016249).

The copending application claims appear to recite all aspects of the instantly claimed invention that are based upon multiple applications of boric acid or borate crosslinking agents. These include the impact of pH values and viscosities. The copending application claims do not appear to disclose treating the surface of the support with a cationic agent. The secondary reference teaches that the surface strength and sizing degree of the support can be controlled by coating the support with a cationic resin. Based upon this teaching, it would have been obvious to one of ordinary skill in the art to coat the support of the medium recited by the claims of the copending application with a cationic resin in order to control these properties.

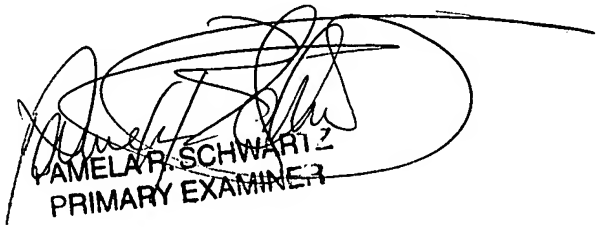
This is a provisional obviousness-type double patenting rejection.

4. Applicant's arguments filed 7/14/05 have been fully considered but they are not persuasive in view of the modified ground of rejection. The examiner has carefully considered claims 15 and 16 and upon reconsideration considers use of the term "undercoat" proper because the claim also refers to an ink receiving layer. However, contrary to applicants' arguments, an absorbent support coated with a cationic resin and then an undercoat, as disclosed by the reference, will result in an increasing region

through the undercoat and a decreasing region through the support. This is consistent with claims 15 and 16.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz
October 11, 2005